

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 58-109512

(43)Date of publication of application : 29.06.1983

(51)Int.Cl.

C08F136/06

C08F 4/52

C08F 6/10

(21)Application number : 56-208107

(71)Applicant : UBE IND LTD

(22)Date of filing : 24.12.1981

(72)Inventor : MAEHARA NOBUNORI
UTADA NORIBUMI
ODA YASUSHI
ASHITAKA HIDETOMO
ISHIKAWA HIDEO

(54) PRODUCTION OF REINFORCED POLYBUTADIENE RUBBER

(57)Abstract:

PURPOSE: To obtain efficiently the titled rubber with excellent physical properties, by subjecting 1,3-butadiene and a mixture of an inert organic solvent and a small amount of CS₂ to a 1,4-polymerization reaction in the presence of a cis- 1,4-polymerization catalyst and subjecting the mixture to a 1,2-polymerization reaction after the addition of a specified 1,2-polymerization catalyst.

CONSTITUTION: 1,3-Butadiene is mixed with an inert organic solvent and a small amount of CS₂. The mixture is further mixed with an organoaluminum compound of formula I, wherein R is a 1W6C alkyl or a like group, X is a halogen and n is 1.5W2, and a cobalt compound which serve as a cis-1,4-polymerization catalyst, and subjected to a 1,4-polymerization reaction. After the addition of an organoaluminum compound (as a 1,2-polymerization catalyst) of formula II, the reaction mixture is subjected to a 1,2-polymerization reaction to form the purpose polybutadiene rubber consisting of 5W30wt% boiling n-hexane-insoluble portion and 95W70wt% soluble portion. Then, the unreacted 1,3-

I

II

$$\text{Al R}_n \text{X}_{3-n}$$

$$\text{Al R}_3$$

butadiene, inert organic solvent and carbon disulfide are distilled, recovered and recirculated.